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EXAMINER
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 11

Application Number: 08/479,077

Filing Date: 06/06/95

Appellant(s): Garcia et al.

David J. Cole
For Appellant

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed 6/16/97.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

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(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 15-24 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *ClaimsAppealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

4,508,811

Gravesteijn et al.

4-1995

5,079,127

Katagiri et al.

1-1992

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(10) New Prior Art

No new prior art has been applied in this examiner's answer.

(11) Grounds of Rejection

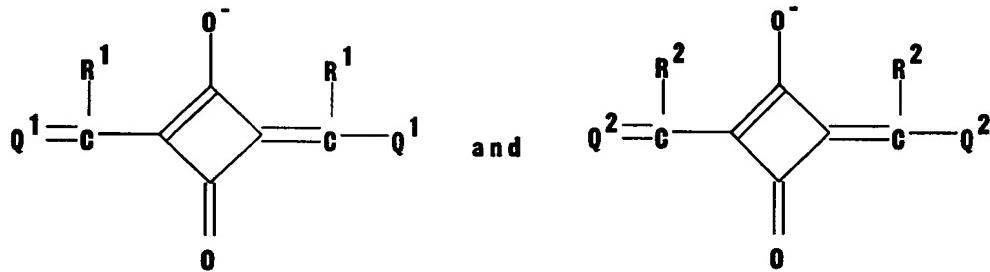
The following ground(s) of rejection are applicable to the appealed claims:

The rejection of claims 16-23 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention stands for the reasons of record and the following.

Applicants argue that in *Marosi*, the Court decided that in the claimed process the Applicants could include the language in the claim "a silicon dioxide source *essentially free* from alkali metal." The facts of *Marosi* refer to a chemical process wherein the starting materials contain essentially no alkali metal and therefore the final product obtained from the claimed process also contain essentially no alkali metal. Applicants attempt to correlate the fact situation of the present case to that of *Marosi* by stating that they have devised a synthesis which enables asymmetric dyes to be produced essentially without contamination by the corresponding symmetric dyes and hence should be able to claim the resultant, essentially pure dyes which, to the best of their knowledge, has not been and cannot be prepared by the prior art synthesis, which inevitably produces a tertiary mixture. Applicants are claiming the product, i.e., the compounds of formula (I), not a product-by-process. Therefore, the reliance on the *Marosi* case appears to be misplaced. Since the present claims are directed to compounds of formula (I), a person skilled in this art would interpret this claim to include

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compounds wherein Q^1CR^1 and Q^2CR^2 are different, therefore it would be redundant to state that the compounds of formula (I) are essentially free of compounds of formulae:



In addition, the above formulae read on compounds of the present invention since claim 15 states Q^1 and Q^2 are each independently a pyrylium, thiopyrylium, selenopyrylium, benzpyrylium, benzthiopyrylium or benzselenopyrylium nucleus, and R^1 and R^2 are each independently a hydrogen or an aliphatic or cycloaliphatic group. One can envision that Q^1 at each occurrence is different or Q^2 at each occurrence is different, R^1 at each occurrence is different, or that R^2 at each occurrence is different, since Q^1 , Q^2 , R^1 , and R^2 are independently selected.

Claims 15-19 and 24 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gravesteijn et al. (US 4,508,811) for the reasons of record and the following. Claims 15-21 and 23-24 are rejected under 35 U.S.C. § 103 as being unpatentable over Katagiri et al. (US 5,079,127) for the reasons of record and the following. Appellants state that none of the references alone or in combination teach a person having ordinary skill in the relevant art how to prepare the asymmetric dyes of the present invention essentially free from the corresponding

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symmetrical dyes as required by the present claims. The claims present herein are directed to the squarylium compounds, not a process of preparing the compounds. Further, Appellants admit that the compounds could be prepared by the prior art process yielding a mixture of three products and that the prior art does not disclose how to separate the mixture. Gravesteijn et al. and Katagiri et al. each teach compounds wherein Q¹ and Q² of Appellants formula (I) is different. In addition, Appellants have failed to provide evidence that the process of the prior art or a modified process of the prior art would not produce the asymmetric dyes. Further, since in a patent it is presumed that a process if used by one skilled in the art will produce the product or result described therein, such presumption is not overcome by a mere allegation that it is possible to operate within the disclosure without obtaining the alleged product. It is to be presumed also that skilled workers would as a matter of course, if they do not immediately obtain desired results, make certain experiments and adaptations, within the skill of the competent worker. The failures of experimenters who have no interest in succeeding should not be accorded great weight. Bullard v. Coe, 1945 C.D. 13, 64 USPQ 359; In re Michalek, 1974 C.D. 458, 74 USPQ 107, 34 CCPA 1124; In re Reid, 1950 C.D. 194, 84 USPQ 478, 37 CCPA 884.

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(12) New Ground of Rejection

This examiner's answer contains the following NEW GROUND OF REJECTION.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

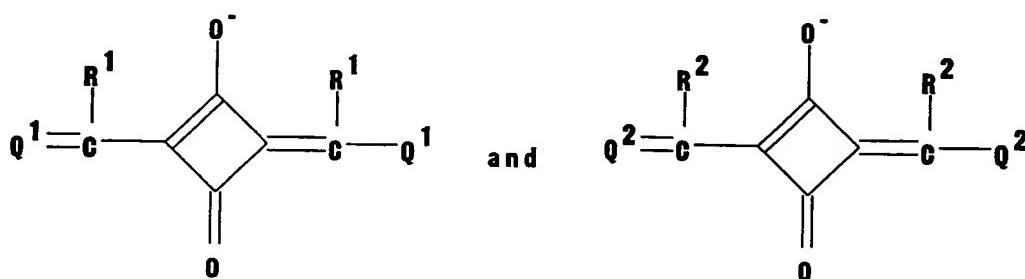
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 states, in line 5, "2,6-dialkyl butylpyrylium". This is found confusing in that one cannot be certain if the "butyl" is part of the pyrylium nucleus, part of the side chain or a typo.

(13) Response to argument**(a) Claim 16 is clear to a person skilled in the art.**

Claim 16 states that the compounds of claim 15 are "essentially free" of the compounds of the formulae:



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While *Marosi* states that the starting materials of the claimed process are “essentially free from”, the facts of the present case are distinguished from that case. Specifically, Appellants state (page 16, lines 13-19), “The Examiner’s attempt to distinguish the present case from *Marosi* on ground that *Marosi* claimed a process whereas the present claims a composition is illogical. There is no reason why the same phrase should be permissible to define the nature of a starting material in a process, yet impermissible to define the nature of a composition claimed *per se*. ” Appellants are asserting that “essentially free” can be used to define a composition *per se*, since their claims are directed to **chemical compounds per se**, this argument does not appear to be on point. When one reads a chemical compound claim it is understood that the subject matter encompassed by the claim is that as represented by the structural formula. Assuming arguendo, the use of “essentially free” in reference to starting materials in a claimed chemical process is permissible due to the nature of the invention. Specifically, a chemical process would require “clean” starting materials in order to avoid side reactions from occurring, thereby requiring less purification of the desired end-product.

Finally, in addressing Appellants statement about Q¹, Q², R¹, and R², being independently selected. While claim 16 does not state that Q¹, Q², R¹, and R² are “independently” selected from . . . , the claim depends from claim 15 which does contain this limitation. Contrary to Appellants comments that “it is apparent from the language of claims 15 and 16 and the corresponding portion of the description at page 30, lines 1-8, that the formulae in claim 16 represents only symmetric dyes”, claim 16 could read on

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compounds, e.g., wherein Q² is the same in each occurrence and R² is different thereby achieving an asymmetric dye. Contrary to the allegation that claim 15 contains the reference that Q¹, Q², R¹, and R² are independently selected and claim 16 does not contain that reference, Q¹, Q², R¹, and R² are only defined in claim 15 which states that each variable is independently defined. Therefore, that limitation is carried over to claim 16 by virtue of the statement in claim 16, "A squarylium compound according to claim 15 which. . ." Accordingly, it is clear that Appellants have not presented clear and convincing arguments concerning the rejection of claims 16-23 under 35 USC 112, second paragraph to warrant withdrawal of the rejection. Therefore the rejection is still deemed proper and stands for the reasons of record and the above stated reasons.

(b) The references show that the Appellants statement of the state of the art is correct.

No comment necessary.

(c) Neither reference clearly discloses an asymmetric dye.

While Gravesteijn does not *disclose* an asymmetric dye (the rejection at issue is 35 USC §103 not a rejection under 35 USC §102(b)), the reference clearly *teaches* that asymmetric dyes are contemplated wherein each X is either O or S, R is defined as an alkyl group having at least 3 carbon atoms, and R₁ is defined as hydrogen or methyl. Therefore, Gravesteijn teaches asymmetric dyes wherein either X at each occurrence is different, R at each occurrence is different, or R₁ at each occurrence is different. Appellants have not presented clear and convincing evidence which details that one possessing skill in the pertinent

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art cannot prepare asymmetric dyes with the Gravesteijn disclosure in hand. While the reference may not provide exact reaction conditions in order to prepare the asymmetric compounds there is sufficient guidance to enable one skilled in the art to prepare the compounds of the present claimed application. e.g., X at one occurrence is O and X at the other occurrence is S, which are encompassed by the instant claims.

Katagiri contains the same teaching as found in Gravesteijn. Specifically, Katagiri et al. disclose (col. 5, lines 7-53) compounds of formula (9), which generically embrace those as claimed herein. In particular, A_3° (of formula (9)) is the moiety as represented at column 5, line 20, and the moieties encompassing Z_{91} and Z_{92} are as defined, at column 5, lines 36-46. Specifically, Z_{91} and Z_{92} encompass pyrylium, thiopyrylium, selenapyrylium, benzopyrylium, benzothiopyrylium, benzoselenapyrylium, naphthopyrylium, naphthothiopyrylium, naphthoselenapyrylium which bear R_{91} - R_{94} . Column 5, lines 47-51 define wherein "each represent hydrogen, alkyl, alkoxy, or a substituted or unsubstituted aryl, styryl, 4-phenyl-1,3-butadienyl, or heterocyclic residue, ...". Appellants claims 20 and 21 require that one of Q^1 or Q^2 contains a phenyl in the 2-position (claim 20) and that the phenyl ring contains an *ortho* alkoxy or cycloalkoxy substituent (claim 21). Since Katagiri et al. define that each R_{91} - R_{94} can be a substituted aryl, one can envision an alkoxy substituted phenyl ring on the pyrylium moiety, especially since Katagiri et al. define (col. 74, lines 42-49) substituted aryl to include tolyl, xylyl, biphenyl, ethylphenyl, methoxyphenyl, ethoxyphenyl, amyoxyphenyl, dimethoxyphenyl and others. Appellants point to the lack of examples that show asymmetric dyes. As Appellants are

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well aware , it is not necessary that every last detail of an invention be described by working examples or otherwise. See Ex parte Wolters et al. (POBA 1979)214 USPQ 735. Katagiri provides sufficient guidance so as to teach one skilled in the pertinent art how to make and use the compounds of the present invention. Therefore, the rejection is still deemed proper and the rejection stands.

(d) Neither reference teaches a process for preparing a reasonably pure asymmetric dye.

While neither reference provides an “example” of a reaction conditions which would permit one skilled in the art to prepare the asymmetric dyes, the disclosure of each reference is sufficient to allow one to glean necessary information so as to allow one skilled in the art to prepare the compounds of the present invention. An applicant need not provide a specific example of everything embraced by a broad claim. See In re Anderson (CCPA 1973) 471 F2d1237, 176 USPQ 331.

(e) If the references do disclose asymmetric dyes, they violate 35 USC 112.

While Appellants believe that if the references do disclose asymmetric dyes, they are non-enabled. As stated above and reiterated here, it is not necessary for an applicant to provide a working example of each and every embodiment of the claimed invention. Appellants go further and state that the references cannot contain asymmetric dyes because if they did, the references would violate 35 USC 112 and that can not be true since each reference is a US Patent and assumed to be valid. This circuitous argument is in err because the assumption from which this argument follows is flawed. The assumption is flawed because

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Appellants are assuming that a reference cannot enable an embodiment unless it has a specific example to that embodiment, which is not true.

(14) *Period of Response to New Ground of Rejection*

In view of the new ground of rejection, appellant is given a period of TWO MONTHS from the mailing date of this examiner's answer within which to file a reply to such new ground of rejection. The reply may include any amendment or material appropriate to the new ground of rejection. Prosecution otherwise remains closed. Failure to respond to the new ground of rejection will result in dismissal of the appeal of the claims so rejected.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


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GROUP 1200

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9/5/97

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